



AUG 22 2006

Express Mail Label No. EV 681303337 US Dated: August 22, 2006

Docket No.: UMY-035  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Heidi A. Tissenbaum *et al.*

Application No.: 10/813324

Confirmation No.: 5837

Filed: March 29, 2004

Art Unit: N/A

For: NEUROTRANSMITTER SIGNALING CAN  
REGULATE LIFE SPAN IN C. ELEGANS

Examiner: Not Yet Assigned

MS Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT (IDS)**

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR 1.97(b)(3)).

Applicants have not submitted a copy of the cited U.S. patent in accordance with 37 CFR 1.98(a)(2)(ii). Applicants submit herewith copies of foreign patents and non-patent references in accordance with 37 CFR 1.98(a)(2).

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 12-0080, under Order No. UMY-035.

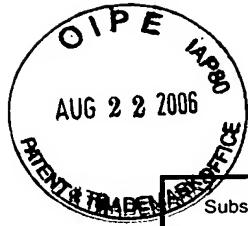
Dated: August 22, 2006

DJM/JAM/mch

Respectfully submitted,

By  
Debra J. Milasincic

Registration No.: 46,931  
LAHIVE & COCKFIELD, LLP  
28 State Street  
Boston, Massachusetts 02109  
(617) 227-7400  
(617) 742-4214 (Fax)  
Attorney/Agent For Applicant



PTO/SB/08a/b (07-05)

Approved for use through 07/31/2006. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/B/PTO				<b>Complete if Known</b>	
				Application Number	10/813324-Conf. #5837
				Filing Date	March 29, 2004
				First Named Inventor	Heidi A. TISSENBAUM
				Art Unit	N/A
				Examiner Name	Not Yet Assigned
Sheet	1	of	2	Attorney Docket Number	UMY-035

<b>U.S. PATENT DOCUMENTS</b>					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)	MM-DD-YYYY		
A1*		US-6,225,120	05-01-2001	Ruvkun et al.	

<b>FOREIGN PATENT DOCUMENTS</b>					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	MM-DD-YYYY		
					T <sup>6</sup>

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \* CITE NO.: Those application(s) which are marked with an single asterisk (\*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(ii)) because that application was filed after June 30, 2003 or is available in the IFP. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

<b>NON PATENT LITERATURE DOCUMENTS</b>					
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
	C1	Ailion, Michael et al, "Neurosecretory control of aging in <i>Caenorhabditis elegans</i> ," <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 96:7394-7397 (1999)			
	C2	Ann, Kyoungsook et al, "Novel Ca <sup>2+</sup> -binding Protein (CAPS) Related to UNC-31 Required for Ca <sup>2+</sup> -activated Exocytosis," <i>The Journal of Biological Chemistry</i> , Vol. 272(32):19637-19640 (1997)			
	C3	Apfeld, Javier et al, "Cell Nonautonomy of <i>C. elegans daf-2</i> Function in the Regulation of Diapause of Life Span," <i>Cell</i> , Vol. 95:199-210 (1998)			
	C4	Aravamudan, Bharathi et al, "Drosophila Unc-13 is essential for synaptic transmission," <i>Nature Neuroscience</i> , Vol. 2(11):965-971 (1999)			
	C5	Augustin, Iris et al, "Munc13-1 is essential for fusion competence of glutamatergic synaptic vesicles," <i>Nature</i> , Vol. 400:457-461 (1999)			
	C6	Barsyte, Dalia et al, "Longevity and heavy metal resistance in <i>daf-2</i> and <i>age-1</i> long-lived mutants of <i>Caenorhabditis elegans</i> ," <i>FASEB J.</i> , Vol. 15:627-634 (2001)			
	C7	Brose, Nils et al, "Regulation of transmitter release by Unc-13 and its homologues," <i>Current Opinion in Neurobiology</i> , Vol. 10:303-311 (2000)			
	C8	Clancy, David J. et al, "Extension of Life-Span by Loss of CHICO, a <i>Drosophila</i> Insulin Receptor Substrate Protein," <i>Science</i> , Vol. 292(5514):104-106 (2001)			
	C9	Cutrer, F. Michael et al, "Antiepileptic Drugs in Migraine, Cluster Headache, and Mood Disorders," <i>Headache, The Journal of Head and Face Pain</i> , Vol. 41(Suppl. 1):S3-S10 (2001)			
	C10	Friedman, David B. et al, "A Mutation in the <i>age-1</i> Gene in <i>Caenorhabditis elegans</i> Lengthens Life and Reduces Hermaphrodite Fertility," <i>Genetics</i> , Vol. 118:75-86 (1988)			
	C11	Gems, David et al, "Genetic, Behavioral and Environmental Determinants of Male Longevity in <i>Caenorhabditis elegans</i> ," <i>Genetics</i> , Vol. 154:1597-1610 (2000)			
	C12	Hekimi, Siegfried et al, "Genetics and the Specificity of the Aging Process," <i>Science</i> , Vol. 299(5611):1351-1354 (2003)			
	C13	Honda, Yoko et al, "The <i>daf-2</i> gene network for longevity regulates oxidative stress resistance and Mn-superoxide dismutase gene expression in <i>Caenorhabditis elegans</i> ," <i>FASEB J.</i> , Vol. 13:1385-1393 (1999)			
Examiner Signature		Date Considered			

Substitute for form 1449A/B/PTO				<b>Complete if Known</b>	
				Application Number	10/813324-Conf. #5837
				Filing Date	March 29, 2004
				First Named Inventor	Heidi A. TISSENBAUM
				Art Unit	N/A
				Examiner Name	Not Yet Assigned
Sheet	2	of	2	Attorney Docket Number	UMY-035

C14	Kawasaki, Masato et al, "A <i>Caenorhabditis elegans</i> JNK signal transduction pathway regulates coordinated movement via type-D GABAergic motor neurons," <i>The EMBO Journal</i> , Vol. 18(13):3604-3615 (1999)
C15	Kittler, Josef T. et al, "Mechanisms of GABA <sub>A</sub> Receptor Assembly and Trafficking," <i>Molecular Neurobiology</i> , Vol. 26:251-268 (2002)
C16	Klass, Michael R., "A Method for the Isolation of Longevity Mutants in the Nematode <i>Caenorhabditis elegans</i> and Initial Results," <i>Mechanisms of Ageing and Development</i> , Vol. 22:279-286 (1983)
C17	Koga, Makoto et al, "A <i>Caenorhabditis elegans</i> MAP kinase kinase, MEK-1, is involved in stress responses," <i>The EMBO Journal</i> , Vol. 19(19):5148-5156 (2000)
C18	Lackner, Mark R. et al, "Facilitation of Synaptic Transmission by EGL-30 Gq $\alpha$ and EGL-8 PLC $\beta$ : DAG Binding to UNC-13 Is Required to Stimulate Acetylcholine Release," <i>Neuron</i> , Vol. 24:335-346 (1999)
C19	Lithgow, Gordon J. et al, "Thermotolerance and extended life-span conferred by single-gene mutations and induced by thermal stress," <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 92:7540-7544 (1995)
C20	Miller, Kenneth G. et al, "RIC-8 (Synembryon): A Novel Conserved Protein that Is Required for Gq $\alpha$ Signaling in the <i>C. elegans</i> Nervous System," <i>Neuron</i> , Vol. 27:289-299 (2000)
C21	Miller, Kenneth G. et al, "G $\alpha$ $_0$ and Diacylglycerol Kinase Negatively Regulate the Gq $\alpha$ Pathway in <i>C. elegans</i> ," <i>Neuron</i> , Vol. 24:323-333 (1999)
C22	Murakami, Shin et al, "A Genetic Pathway Conferring Life Extension and Resistance to UV Stress in <i>Caenorhabditis elegans</i> ," <i>Genetics</i> , Vol. 143:1207-1218 (1996)
C23	Nurrish, Stephen et al, "Serotonin Inhibition of Synaptic Transmission: G $\alpha$ $_0$ Decreases the Abundance of UNC-13 at Release Sites," <i>Neuron</i> , Vol. 24:231-242 (1999)
C24	Owens, David F. et al, "Is There More to GABA than Synaptic Inhibition?" <i>Nat. Rev. Neuroscience</i> , Vol. 3:715-727 (2002)
C25	Richmond, Janet E. et al, "UNC-13 is required for synaptic vesicle fusion in <i>C. elegans</i> ," <i>Nature Neuroscience</i> , Vol. 2(11):959-964 (1999)
C26	Richmond, Janet E. et al, "The synaptic vesicle cycle: exocytosis and endocytosis in <i>Drosophila</i> and <i>C. elegans</i> ," <i>Current Opinion in Neurobiology</i> , Vol. 12:499-507 (2002)
C27	Sassa, Toshihiro et al, "Regulation of the UNC-18- <i>Caenorhabditis elegans</i> Syntaxin Complex by UNC-13," <i>The Journal of Neuroscience</i> , Vol. 19(12):4772-4777 (1999)
C28	Sutton, R. Bryan et al, "Crystal structure of a SNARE complex involved in synaptic exocytosis at 2.4 Å resolution," <i>Nature</i> , Vol. 395:347-353 (1998)
C29	Tatar, M. et al, "Slow aging during insect reproductive diapause: why butterflies, grasshoppers and flies are like worms," <i>Experimental Gerontology</i> , Vol. 36:723-738 (2001)
C30	Villanueva, Alberto et al, " <i>jkk-1</i> and <i>mek-1</i> regulate body movement coordination and response to heavy metals through <i>jnk-1</i> in <i>Caenorhabditis elegans</i> ," <i>The EMBO Journal</i> , Vol. 20(18):5114-5128 (2001)
C31	Wolkow, Catherine A. et al, "Regulation of <i>C. elegans</i> Life-Span by Insulinlike Signaling in the Nervous System," <i>Science</i> , Vol. 290(5489):147-150 (2000)
C32	Zhang, Wei et al, "Munc-18 Associates with Syntaxin and Serves as a Negative Regulator of Exocytosis in the Pancreatic $\beta$ -Cell," <i>The Journal of Biological Chemistry</i> , Vol. 275(52):41521-41527 (2000)
C33	International Search Report for Application No. PCT/US04/09882, dated January 14, 2005

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature	Date Considered
--------------------	-----------------